

## **Remarks/Arguments**

In view of the comments below Applicant respectfully requests that the Examiner reconsider the present application, including claims 1-38 and claims 77-83, and withdraw the rejections of claims 1-4, 6-9, 11, 16-17 21-25, 28, 33-37 and 77-83. Claims 1 and 77 have been amended to further clarify the claimed elements. Claim 5 has been amended to resolve an antecedent basis issue. No new matter has been added by any of these amendments. This Amendment and response is being filed concurrently with a Request for Continued Examination under 37 C.F.R. §1.114. Paragraphs a), b), and c) below address issues arising with the November 3, 2003 Final Office Action. Paragraph d) addresses distinguishes the claimed invention from some newly discovered references that are being provided by a concurrently filed IDS.

- a) The Examiner had issued a restriction requirement between the invention defined in claims 1-38 and the invention defined by claims 39-76, suggesting that they are related as a sub combination and combination and thus distinct if the combination does not require the particulars of the sub combination and the sub combination has separate utility. Applicant does not believe that the Examiner has responded to Applicant's earlier advanced arguments traversing this restriction requirement. Therefore Applicant respectfully requests that the Examiner consider those arguments.

b) Claims 5, 10, 12-15, 18-20, 26, 27, 29-32, and 38 have been objected to as dependent upon a rejected base claim but would be allowable if rewritten to include all limitations of the base and any intervening claims. Applicant appreciates and concurs with the Examiner's view that these claims define allowable subject matter. Applicant may wish to amend such claims if further discussions of the independent/intervening claims are not productive.

c) Claims 1-4, 6-9, 11, 16-17, 21-25, 28, 33-37, and 77-83 have been rejected under 35 U.S.C. 103(a) as being anticipated by Melanson (U.S. Patent No. 6,373,334 B1), (citing Fig. 2a).

The Examiner maintains that Melanson shows all limitations of claim 1 other than generating a radio frequency signal and alleges that is obvious given the intended use of the claimed invention. Applicant respectfully submits that relying on "intended use" of the claimed invention to supply the suggestion or teachings that are missing from the Melanson reference is not a proper basis for a §103(a) rejection.

Furthermore Applicant has amended claim 1 and claim 77 to further define the linearizer. For example, claim 1 now recites "a linearizer, coupled to the input signal and the radio frequency signal, operable to supply a corrective signal at a location prior to the switching mode power amplifier, the linearizer using an adaptive process."

The Examiner is of the view that 220, 214, and 212 of FIG. 2a (Melanson) shows a linearizer. Applicant respectfully submits that Melanson does not show the claimed linearizer, specifically as intercoupled and using an adaptive process.

As noted by Applicant in an earlier (September 30, 2003) response, the Melanson reference clearly discusses a high power audio amplifier system rather than a radio frequency

amplifier system as claimed in claims 1-38 and new claims 77-83 (see for example, Melanson background section at column 1). Whereas in stark contrast, Applicant's disclosure deals with radio frequency power amplification systems as noted variously throughout the specification and claims at for example, paragraph 0002 – radio frequency power amplification, paragraph 0014 – input signal frequencies in excess of 300 KHz and 800 MHz, paragraph 0058 – operation in frequency bands such as VHF, UHF, SHF, EHF (L, S, X, Ku, Ka, etc.) with varying modulation formats suitable for CDMA, W-CDMA, TDMA, FM, QPSK, QAM and so on.

Clearly Melanson does not show or suggest such a switching mode power amplifier that provides a radio frequency signal nor does this reference show or suggest the claimed linearizer.. Since Melanson taken alone or with any other reference of record does not show or suggest all of the limitations of claim 1, Applicant respectfully submits that Melanson does not properly support a §103(a) based rejection of claim 1 or claim 77. For this reason, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of independent claims 1 and 77 under 35 U.S.C. §103(a) based on Melanson. Furthermore claims 2-38 and 78-83 are each dependent at some level on claim 1 or claim 77 and thus by virtue of dependency on an apparently allowable claim should likewise be deemed allowable. In addition other reasons were provided in an earlier response showing how various of the claimed limitations were not shown by the Melanson reference. Thus and for this reason Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 2-4, 6-9, 11, 16-17, 21-25, 28, 33-37, and 78-83 under 35 U.S.C. §103(a) based on Melanson.

d) Applicant has recently conducted a search of the art in the relevant field and found some references that may be more relevant to the present application. These references have been provided via an Information Disclosure Statement that is filed herewith. Jayaraman (US 6,630,899) was recently issued (October 2003) and discusses higher frequency power amplifiers using a digital modulator to drive a switched amplifier where the modulator uses band pass filters. Jayaraman et al. (US 6,577,189, issued June 2003) describes similar subject matter. These references led to Tripathi et al (US 5,777,512 issued July 1998) that also seems to contemplate band pass filters in a digital modulator (col. 3, line 55 – 60).

Applicant however believes that the present invention as variously claimed is still allowable over these newly discovered references, since these references taken alone or together with any other reference of record do not show or suggest the linearizer as claimed by independent claims 1 or 77. Thus the independent claims and by virtue of dependency the remaining pending dependent claims (2-38 and 78-83) appear to be allowable.

Furthermore other limitations of various of the dependent claims are not shown or suggested by these references taken alone or together with any other reference of record and thus various of the dependent claims are allowable for additional reasons that will be briefly and at least partially summarized in a listing below for the Examiner's convenience.

Claim 3 – multi-band band pass delta sigma modulator  
Claim 4 – tunable output filter  
Claim 8 – 19 various limitations corresponding to an extended interface  
Claim 20 – 21 further limitations regarding the linearizer  
Claim 24 specifics of the interface  
Claim 28 – 32 various limitations directed to adjusting power output  
Claim 33-34 multi-band band pass filters  
Claim 35 specifics of relative location of claimed elements  
Claim 36 – 38 specifics of powering the claimed power amplifier  
Claim 78 multi-band band pass DSM  
Claim 79 – 81 various limitations directed to adjusting power output  
Claim 82 – 83 further limitations regarding the linearizer

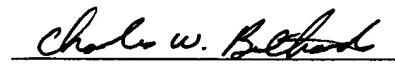
Applicant respectfully submits that the limitations of the dependent claims as briefly described above are not shown or suggested by any combination of the references of record and thus should be allowable for these additional reasons.

Accordingly, Applicant respectfully submits that the claims, as amended, clearly and patentably distinguish over the cited references of record and as such are to be deemed allowable. Such allowance is hereby earnestly and respectfully solicited at an early date. If the Examiner has any suggestions or comments or questions, calls are welcomed at the phone number below.

Application No. 10/003,725  
Preliminary Amendment dated January 23, 2004  
Reply to Final Office Action of November 3, 2003

Although it is not anticipated that any fees are due or payable, the Commissioner is hereby authorized to charge any fees that may be required to Deposit Account No. 50-1147.

Respectfully submitted,

  
Charles W. Bethards  
Reg. No. 36,453

Posz & Bethards, PLC  
11250 Roger Bacon Drive  
Suite 10  
Reston, VA 20190  
Phone (703) 707-9110  
Fax (703) 707-9112  
Customer No. 23400